SANTA CRUZ BIOTECHNOLOGY, INC.

LCAT (D-2): sc-376682

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The lipase gene family belongs to one of the most robust genetic superfamilies found in living organisms, which includes esterases and thioesterases. Members of the AB hydrolase subfamily include hepatic lipase (HL), endothelial lipase (EL), lipoprotein lipase (LPL), pancreatic lipase (PL), gastric lipase (GL) and the lecithin-cholesterol acyltransferase (LCAT). These family members play a crucial role in the metabolism of lipids. LCAT esterifies cholesterol, which is required for cholesterol transport. LCAT deficiency has been implicated in fish-eye disease, a rare genetic disorder of high density lipoprotein (HDL) metabolism.

REFERENCES

1. McIntyre, N. 1988. Familial LCAT deficiency and fish-eye disease. J. Inherit. Metab. Dis. 11: 45-56.
2. Teh, E.M., et al. 1999. Classical LCAT deficiency resulting from a novel homozygous dinucleotide deletion in exon 4 of the human lecithin: cholesterol acyltransferase gene causing a frameshift and stop codon at residue 144. Atherosclerosis 146: 141-151.
3. Huesca-Gomez, C., et al. 2004. Contribution of cholesteryl ester transfer protein and lecithin: cholesterol acyltransferase to HDL size distribution. Endocr. Res. 30: 403-415.
4. Nakamura, Y., et al. 2004. Molecular mechanism of reverse cholesterol transport: reaction of pre-β-migrating high-density lipoprotein with plasma lecithin/cholesterol acyltransferase. Biochemistry 43: 14811-14820.
5. Miida, T., et al. 2004. T13M mutation of lecithin-cholesterol acyltransferase gene causes fish-eye disease. Clin. Chim. Acta 343: 201-208.

CHROMOSOMAL LOCATION

Genetic locus: LCAT (human) mapping to 16q22.1.

SOURCE

LCAT (D-2) is a mouse monoclonal antibody raised against amino acids 283-423 mapping near the C-terminus of LCAT of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LCAT (D-2) is available conjugated to agarose (sc-376682 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376682 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376682 PE), fluorescein (sc-376682 FITC), Alexa Fluor® 488 (sc-376682 AF488), Alexa Fluor® 546 (sc-376682 AF546), Alexa Fluor® 594 (sc-376682 AF594) or Alexa Fluor® 647 (sc-376682 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376682 AF680) or Alexa Fluor® 790 (sc-376682 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

LCAT (D-2) is recommended for detection of precursor and mature LCAT of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LCAT siRNA (h): sc-60926, LCAT shRNA Plasmid (h): sc-60926-SH and LCAT shRNA (h) Lentiviral Particles: sc-60926-V.

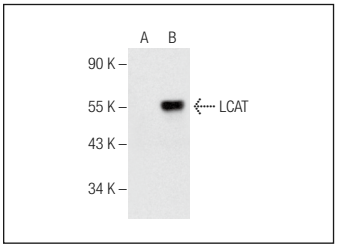
Molecular Weight of LCAT: 67 kDa.

Positive Controls: human LCAT transfected HEK293T whole cell lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



LCAT (D-2): sc-376682. Western blot analysis of LCAT expression in non-transfected (**A**) and human LCAT transfected (**B**) HEK293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bi, Y., et al. 2020. Identification of ALPPL2 as a naive pluripotent state-specific surface protein essential for human naive pluripotency regulation. Cell Rep. 30: 3917-3931.e5.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.